

CELCON® TX-31

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A polymer modified wear resistance grade (an easy-flow grade) for general injection molding. Suitable for applications requiring reduced wear noise and a strong friction and wear resistance without sacrificing mechanical properties.

Product information

Resin Identification	POM	ISO 1043
Part Marking Code	>POM<	ISO 11469

Rheological properties

Melt mass-flow rate	30 g/10min	ISO 1133
Melt mass-flow rate, Temperature	190 °C	
Melt mass-flow rate, Load	2.16 kg	
Moulding shrinkage, parallel	2.0 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2550 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	56 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	8 %	ISO 527-1/-2
Nominal strain at break	35 %	ISO 527-1/-2
Flexural modulus	2400 MPa	ISO 178
Flexural strength	80 MPa	ISO 178
Charpy notched impact strength, 23°C	7 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.5 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.38 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	165 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	89 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	130 E-6/K	ISO 11359-1/-2

Electrical properties

Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E16 Ohm	IEC 62631-3-2

Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Density	1390 kg/m ³	ISO 1183

Injection

Drying Recommended	no
Drying Temperature	100 °C
Drying Time, Dehumidified Dryer	3 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	195 °C
Min. melt temperature	180 °C
Max. melt temperature	210 °C

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Screw tangential speed	≤0.3 m/s
Mold Temperature Optimum	70 °C
Min. mould temperature	60 °C
Max. mould temperature	80 °C
Hold pressure range	60 - 120 MPa

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Low wear / Low friction

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Hyundai	MS237-05 Type C	Ulsan, Korea